

the development of the young of Echinoderms from the egg without the intervention of a locomotive "pseudembryo." As I have already stated, I cannot, on account of the unfavourable conditions for carrying on such investigations under which the majority of the species were procured, say with certainty that no trace of pseudembryonic appendages or provisional organs exists in any of these instances; but I feel satisfied that none such occur in *Psolus ephippifer*, in the Kerguelen species of *Hemiaster*, or in *Ophiocoma didelphys*; nor am I in a position to affirm that in these high southern latitudes direct development is universal in the subkingdom. I believe, indeed, that it is not so; for species of the genera *Echinus*, *Strongylocentrotus*, and *Amblypneustes* run far south, and a marsupial arrangement seems improbable in any of these. It is, however, a significant fact that while in warm and temperate seas "Plutei" and "Bipinnariæ" are constantly taken in the surface-net, during our southern cruise between the Cape of Good Hope and Australia only one form of Echinoderm "pseudembryo" occurred; and that we regarded with some little doubt as the larva of *Chirodota*, from the presence of calcareous wheels in the skin.

South Atlantic,
March 14, 1876.

Note.—Since this paper was written, several notices of these Kerguelen Echinoderms have appeared, both in this country and in America, in connexion with the preliminary reports of the naturalists attached to the Transit Expedition. As, however, this communication is only intended as a preliminary sketch of some of the peculiar phenomena of their propagation, and does not pretend to accuracy in nomenclature, I have thought it better to allow it to remain without alteration. When satisfactory descriptions and figures are published, it will be necessary to go into the whole question of synonymy in detail.—C. Wy. T.

Contributions to the Ornithology of New Guinea.—Part I.
Notes on a Small Collection of Birds from South-eastern New Guinea. By R. BOWDLER SHARPE, F.L.S.

[Read June 15, 1876.]

So much interest attaches to the natural history of New Guinea, that I am sure the Members of the Society will be pleased to see a few birds which have been forwarded to the British

Museum by the Rev. J. S. M'Farlane. The following is an extract from a letter addressed to me by that gentleman explaining the circumstances under which the specimens were procured:—

“Somerset, Cape York,
“Jan. 31st, 1876.

“The remnant of the Macleay Expedition have just returned from Port Moresby in our little steamer. They have given me a Bower-bird's nest and some specimens, which I also send to you by this mail in a case; they are from the neighbourhood of Port Moresby, about twenty miles inland.”

Mr. M'Farlane also writes:—“I send you a Bird of Paradise which I got up the Baxter river; I skinned it myself, and when I got back I got one of the ‘Chevert’ staff to do it up for me. It is not a very good specimen, but yet the best, I think, out of New Guinea. . . . D'Albertis has not got any of this kind; and the party from the ‘Chevert’ are not likely to get them at Port Moresby, except mutilated ones from the natives. They seem to come from the head of the gulf.”

My disappointment may be imagined on finding that the Bird of Paradise here referred to had been abstracted *in transitu*, apparently by rats, and that only a few red plumes remained of this highly interesting bird, which was apparently an adult male of *P. raggiana*.

1. GEOFFROYIUS PUCHERANI.

Pionias pucherani (Bp.); *Finsch, Papag.* ii. p. 385.

The only skin sent is not adult; but on comparing it with our series in the Museum, I believe it to be referable to *G. pucherani*.

2. DOMICELLA SCINTILLATA.

Domicella scintillata (Temm.); *Finsch, Papag.* ii. p. 752.

I have compared the specimen now sent with others from New Guinea and the Aru Islands, and can find no specific difference, though the Port-Moresby skin is not fully adult. The species is not mentioned in the last of D'Albertis's collection.

3. TRICHOGLOSSUS MASSENA.

Trichoglossus massena, Bp.; *Salvad. & D'Albert. Ann. Mus. Genov.* vi. p. 812.

Count Salvadori compared D'Albertis's single specimen with Mr. Gray's Plate of the species in the late Mr. Brenchley's 'Cruise of the Curaçoa,' and came to the conclusion that the New-Guinea bird was the same. I have compared a fine skin sent by Mr. M'Farlane with the others in the Museum from the Solomon Islands, and can confirm Count Salvadori's determination.

4. *CENTROPUS SPILOPTERUS*.

Centropus spilopterus, Gray, P. Z. S. 1858, p. 184; *Schl. Obs. Zool.* iv. p. 11.

This is a very interesting bird, as hitherto the species has been supposed to be confined to the Ke Islands. On comparing the specimen now sent with the type of *C. spilopterus*, I can find no specific differences, nor with two other specimens from New Guinea collected by Mr. Wallace. These latter birds are named *C. violaceus*; but they are certainly not the true species, as they are greenish and have no violet shade about them. The bird will, I believe, ultimately bear the name of *C. spilopterus*,—not that the streaks on the wing-coverts are a specific character; for I regard them as nothing but the last remains of the speckled plumage. Professor Schlegel has given a sketch of the Papuan *Centropi* (*Obs. Zool.* iv. p. 11), in which he recognizes four species:—

(1) *C. MENEBEKI*, Less.

Hab. New Guinea, Salwatti, Aru Islands, Mysol.

(2) *C. BERNSTEINI*, Schl.

Hab. Salwatti.

(3) *C. SPILOPTERUS*, Gray.

Hab. Ke Islands.

(4) *C. VIOLACEUS*, Q. & G.

Hab. Soek Island.

This latter species Count Salvadori has named *Nesocentor chalybeus* from a Mysol skin, believing it to be distinct from the true *C. violaceus*, which is from New Ireland.

As regards *C. bernsteini* and *C. spilopterus*, I believe that they are one and the same species, the latter not being quite adult. The synonymy, therefore, will be as follows:—

C. SPILOPTERUS.—*C. spilopterus*, Gray, P. Z. S. 1858, p. 184; *id. Cat. Mamm. & B. N. Guinea*, p. 43 (1859); *id. P. Z. S.* 1861, p. 437; *Schl. Obs. Zool.* iv. p. iii; Gray, *Hand-l. B.* ii. p. 214 (1870).—*C. violaceus*, Finsch, *Neu-Guinea*, p. 160 (1865); Gray, *Hand-l. B.* ii. p. 214 (1870).—*C. bernsteini*, *Schl. Obs. Zool.* ii. p. 31, iv. p. 11.

Mr. M'Farlane's specimen measures as follows—total length 19·5 inches, culmen 1·5, wing 8·8, tail 12·5, tarsus 2·0.

5. *GRAUCALUS ANGUSTIFRONS*, sp. n.—*G. hypoleucus*, Gould; *Salvad. & D'Albert. t. c.* p. 24.

I cannot follow Count Salvadori in referring the white-breasted *Graucalus* of Southern New Guinea to the *G. hypoleucus* of Gould.

No dimensions are given by the last-named author, to begin with ; but the bird sent to me by Mr. M'Farlane is rather larger than Mr. Gould's figure. There are several other little points in which the New-Guinea bird differs ; but, before every thing, Mr. Gould makes no mention of the black frontal line in the Australian species, which is very conspicuous in the one to which I now give the name of *angustifrons*. I am sorry that I have not in the Museum an Australian skin to compare. At the same time I would draw Count Salvadori's attention to the Aru bird, of which he has probably a better series than we have in London. It has the black frontal line, succeeded by a very distinct line of white which occupies the *hinder* part of the *eyelid*, leaving the fore and lower parts of the latter black like the lores. This is very well marked in the adult Aru specimen now before me, and differs from the New-Guinea bird and from Mr. Gould's figure.

6. *CRACTICUS CASSICUS*.

C. cassicus (*Bodd.*) ; *Salvad. & D'Albert. t. c. p. 27.*

Two specimens.

7. *EULABES DUMONTI*.

Mino dumonti, Less. ; Salvad. & D'Albert. t. c. p. 828.

Appears to be quite inseparable from other specimens from Dorey and the Aru Islands.

8. *ORIOLOUS STRIATUS*.

Mimeta striata, Salvad. & D'Albert. t. c. p. 828.

The single specimen sent by Mr. M'Farlane agrees with others from Dorey collected by Mr. Wallace. This species seems to vary very little ; but the bill shows some difference in length and thickness ; both thick- and thin-billed examples, however, occur in the same locality. The streaks on the breast are broader in some birds than in others, being apparently more pronounced in the younger individuals.

9. *CLAMYDODERA CERVINIVENTRIS*.

C. cerviniventris, Gould ; Salvad. & D'Albert. t. c. p. 828.

Three specimens of this Bower-bird have been sent ; and Signor D'Albertis had already procured a pair on the coast of New Guinea opposite Yule Island. They cannot be separated from Australian examples, with two of which I have compared them ; but they differ somewhat *inter se*. The streaks on the forehead appear to extend further up the crown in two of the specimens ; and the mottlings on the back are less pronounced than in

one of the Cape-York skins, while the light tips to the wing-coverts and secondaries are not very distinct. All are in somewhat worn plumage. Mr. M'Farlane also sends the bower of this bird, which closely resembles the original one discovered by Mr. Macgillivray and now in the British Museum. It is not ornamented with shells, but has a few berries scattered about on the floor and near the top.

Additional Note relative to the Norwegian Lemming.

By W. DUPPA CROTCH, Esq., F.L.S.

[Read June 15, 1876.]

IN the course of a paper which I lately had the honour of reading before the Linnean Society I stated, with reference to the migration of the Lemmings, that this was usually considered to indicate a severe winter approaching.

It is a fact that the Lemmings began to appear last autumn in Övre Gudbrandsdalen; and I now know that the fjeld is overrun with them. Moreover the winter has been very severe, and the summer exceptionally backward, so that ice still remains on many lakes. Yet I am disinclined to believe in this motive for their peregrinations:—first, because they have not chosen warmer quarters than they had “at home,” wherever that may be; and, secondly, because, as they live entirely beneath the snow during winter, they are practically unaffected by its severity, and not much troubled by its continuance. With reference to the theory of Atlantic land to which they may in former ages have retreated, I am glad to find that the Norwegian Government have fitted out a ship, the ‘Voringen,’ under Capt. Wille, for the express purpose of exploring the ocean between Norway and Greenland. The survey in question is to determine the extent of the deep channel which fringes the coast, and to explore the bank between the Faroe Islands and Iceland, as well as to conduct other investigations which may possibly add to (or diminish) the probability of the former existence of land to which, as I have before said, the Lemmings and many other migrants may have betaken themselves, but which has now left no surer traces in these latitudes than the hereditary instincts of its former visitants.
